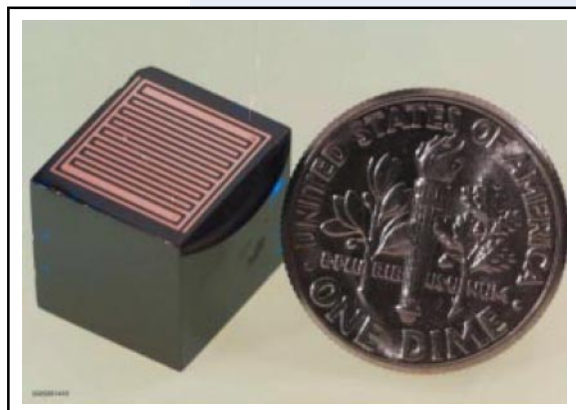


# Field Portable CdZnTe (CZT) Radiation Detectors to Monitor and Localize Special Nuclear Materials

- Field-portable CZT radiation detectors are required by international nonproliferation community to combat nuclear smuggling, enhance safeguard programs and monitor treaties



- New Russian crystal-growth technology will allow development of new class of CZT instruments with superior advantages:
  - room temperature operation
  - gamma-ray spectrometers with pulse processing and low-power readout electronics
  - high-energy resolution for isotope identification
  - imaging with high spatial resolution
  - improved measurement time, long-term stability & reliability
  - compact and lightweight
  - reduced manufacturing costs

- Potential commercial applications include cancer detection, disease diagnosis, airport security x-rays, aluminum recycling and environmental remediation

